



# Seabasing

*A Joint Force Enabler*

*In Area-Denial and Anti-Access Environments*

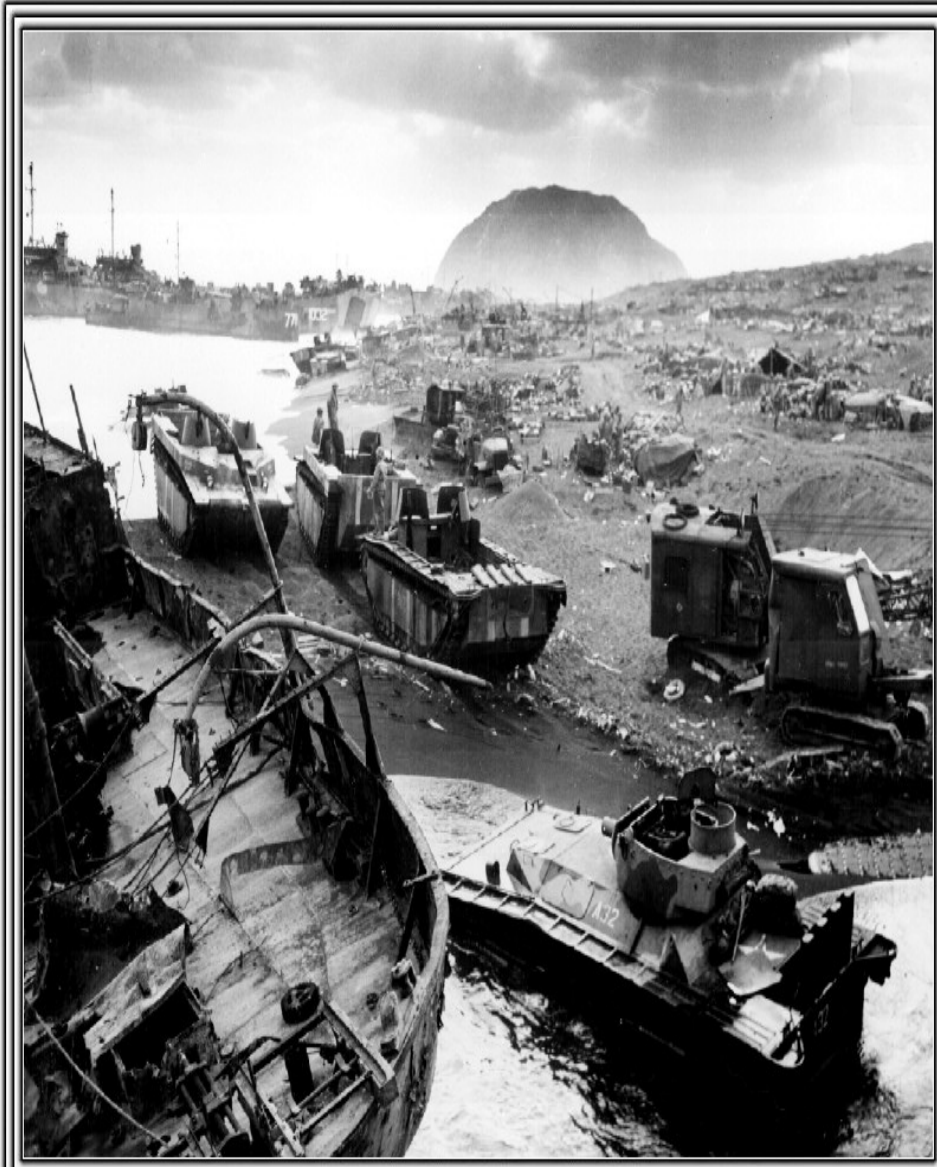


**Rick Betsinger**  
**Branch Head, Expeditionary Ship**  
**Capabilities Sea basing Integration**  
**Division**  
**Capabilities Development Directorate**  
**Marine Corps Combat Development**  
**Command**  
**Quantico, Virginia 22134**  
**703.784.6038**



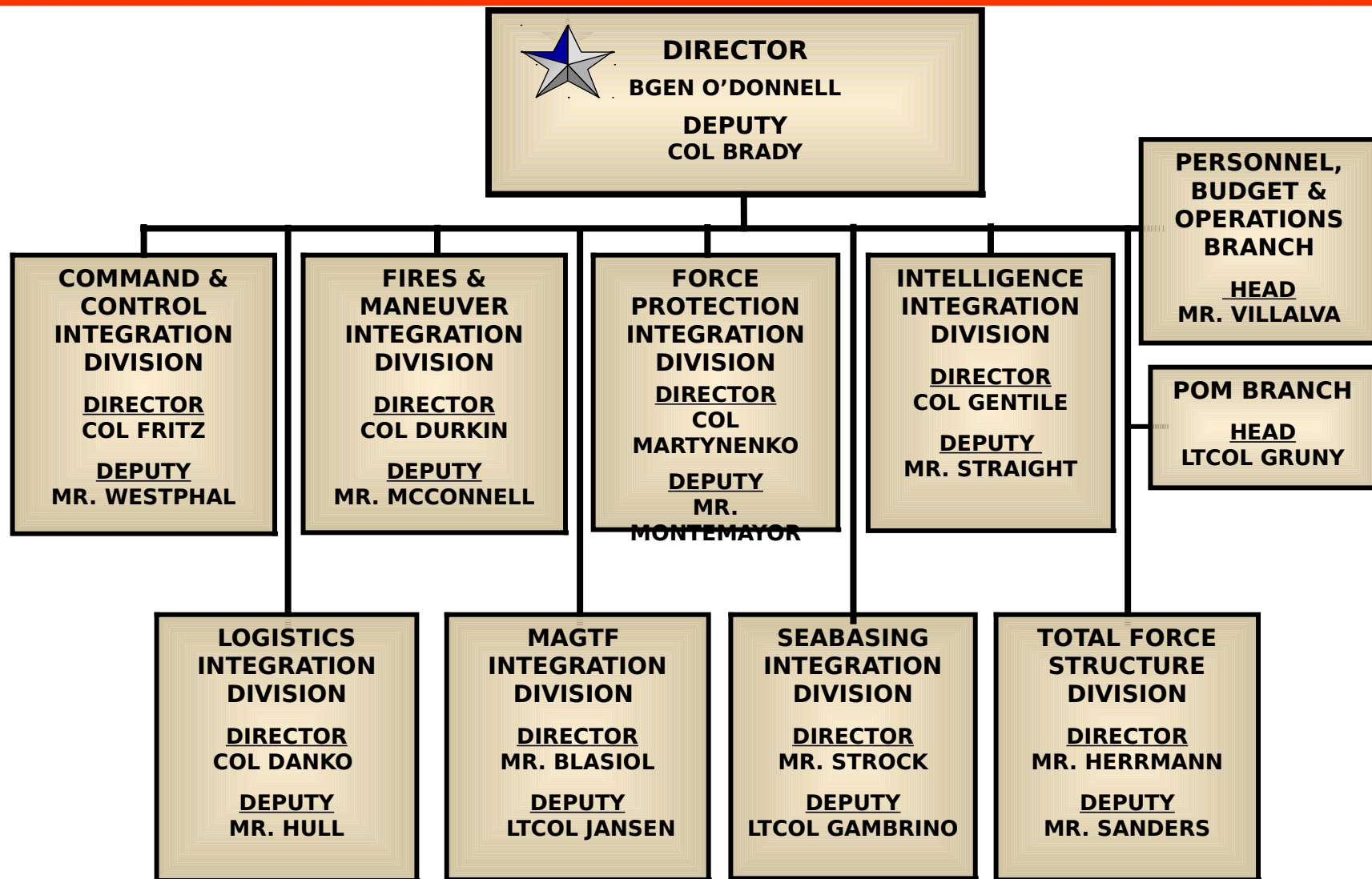
# Agenda

- **Organization**
- **Sea basing-Seabase**
- **The Marine Expeditionary Brigade (MEB)**
- **Maritime Expeditionary Capabilities**
  - Assault Echelon
  - MPF(F)
  - Connectors
- **MEB**
- **MPF(F)**
- **Enablers**
- **Experimentation**





# Combat Development Directorate

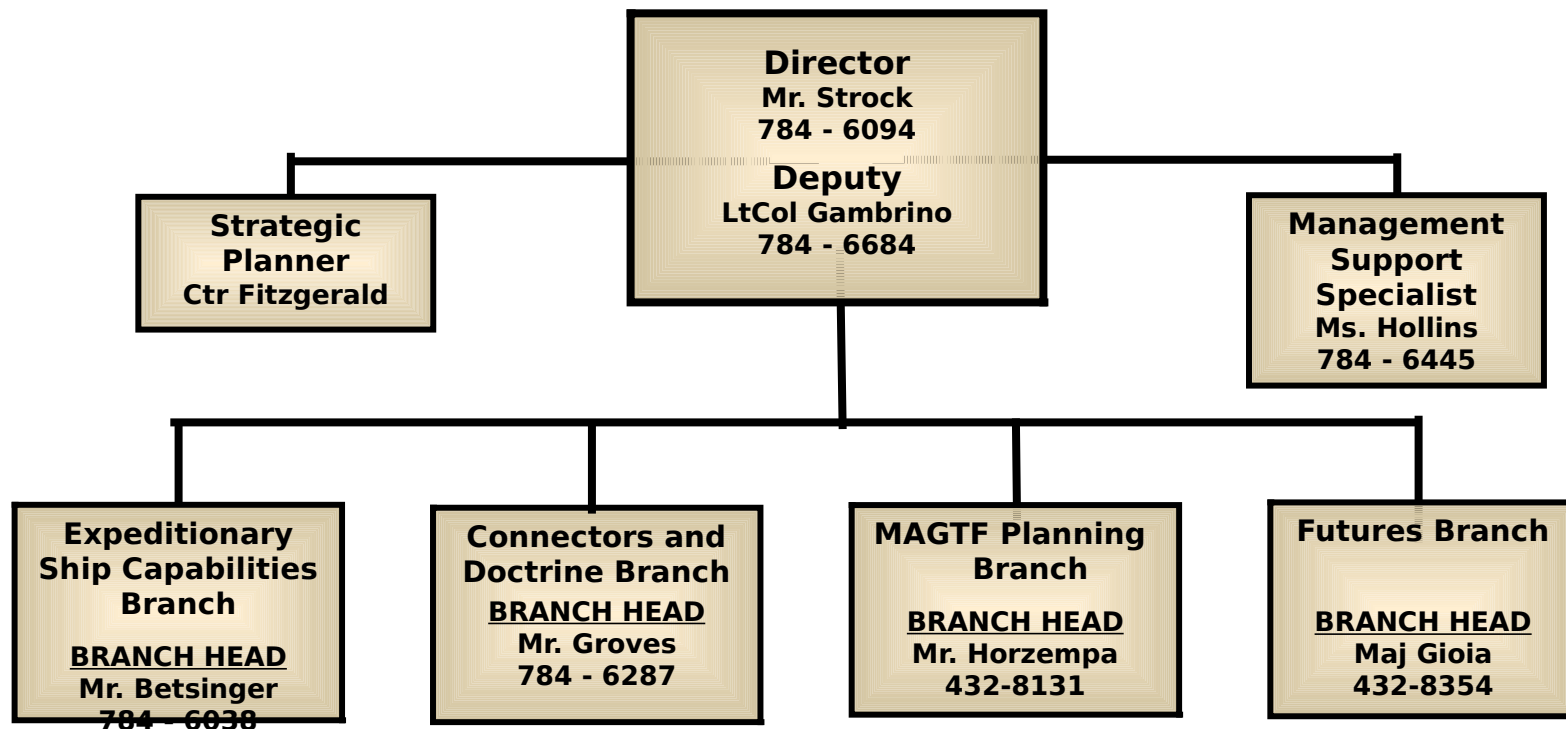




# Seabasing Integration Division



**Mission:** Develop future Marine Corps expeditionary maritime requirements; ensure OPNAV resource sponsor/s understand and accurately convey these requirements. Represent the Deputy Commandant for Combat Development & Integration on all Seabasing platform matters. Ensure the Marine Corps is fully supported by the Navy's Long-Term Plan for Shipbuilding (30-year plan) and capable of completing Title 10-mandated amphibious warfighting functions.

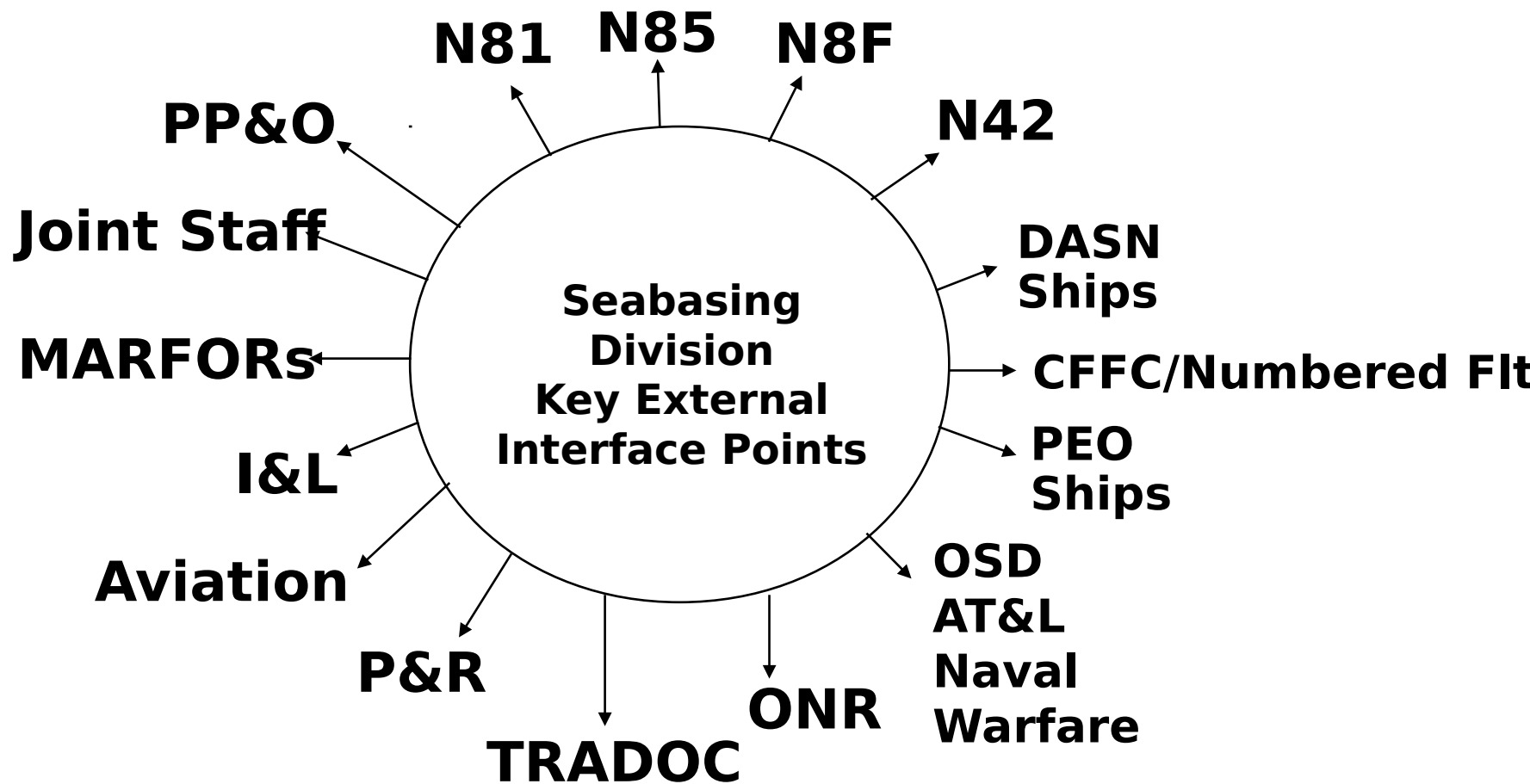






# Seabasing Integration Division

## *Key Interface Points*





# Seabasing

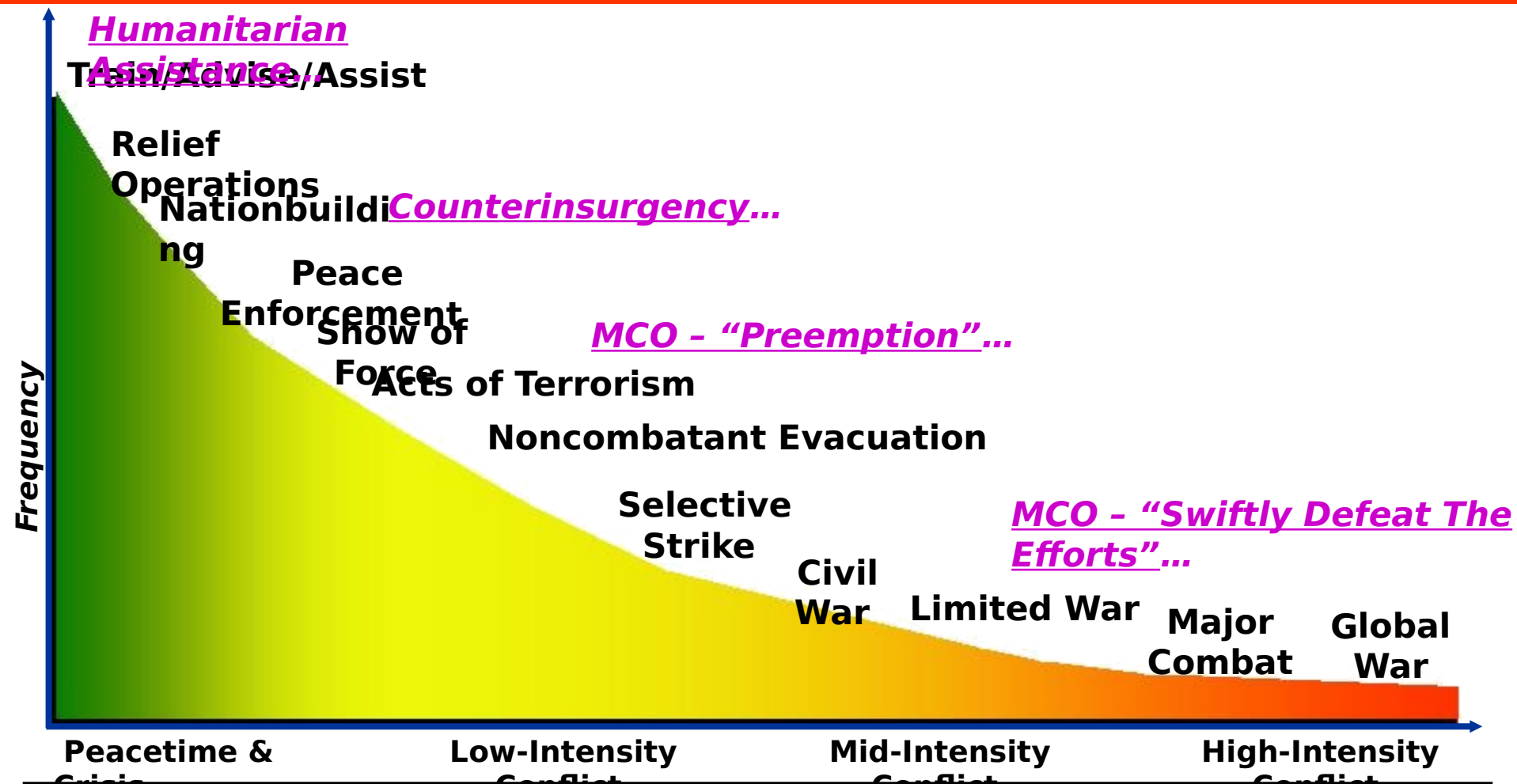


- **National capability for global force projection**
  - Exploits sea as maneuver space 365 days a year
- **Enables capabilities of Coalition/Joint Forces**
- **Maximizes the effects of forward presence**
- **Reduces dependence on vulnerable land bases, “steps lightly” on allies and partners**
  - Increased options for the President

***“Our forces in the next century must be agile, lethal, readily deployable... We must be able to project our power over long distances, in days or weeks, rather than months”***  
***President G.W. Bush***



# Joint Seabasing: Scalable and Responsive Power Projection



**Seabasing will provide...the capability to dissuade a potential adversary... and, if necessary, project joint combat power within reduced timelines... with operational independence of HNS....SECNAV, March 05**



# Today's Capability

**Improved Navy Lighterage System**



**Surge Amphibs at Sea**



**Legacy MPF**

**Roll on/Roll off Discharge Facility (RRDF)**



**High Speed Vessel**



**LCAC**

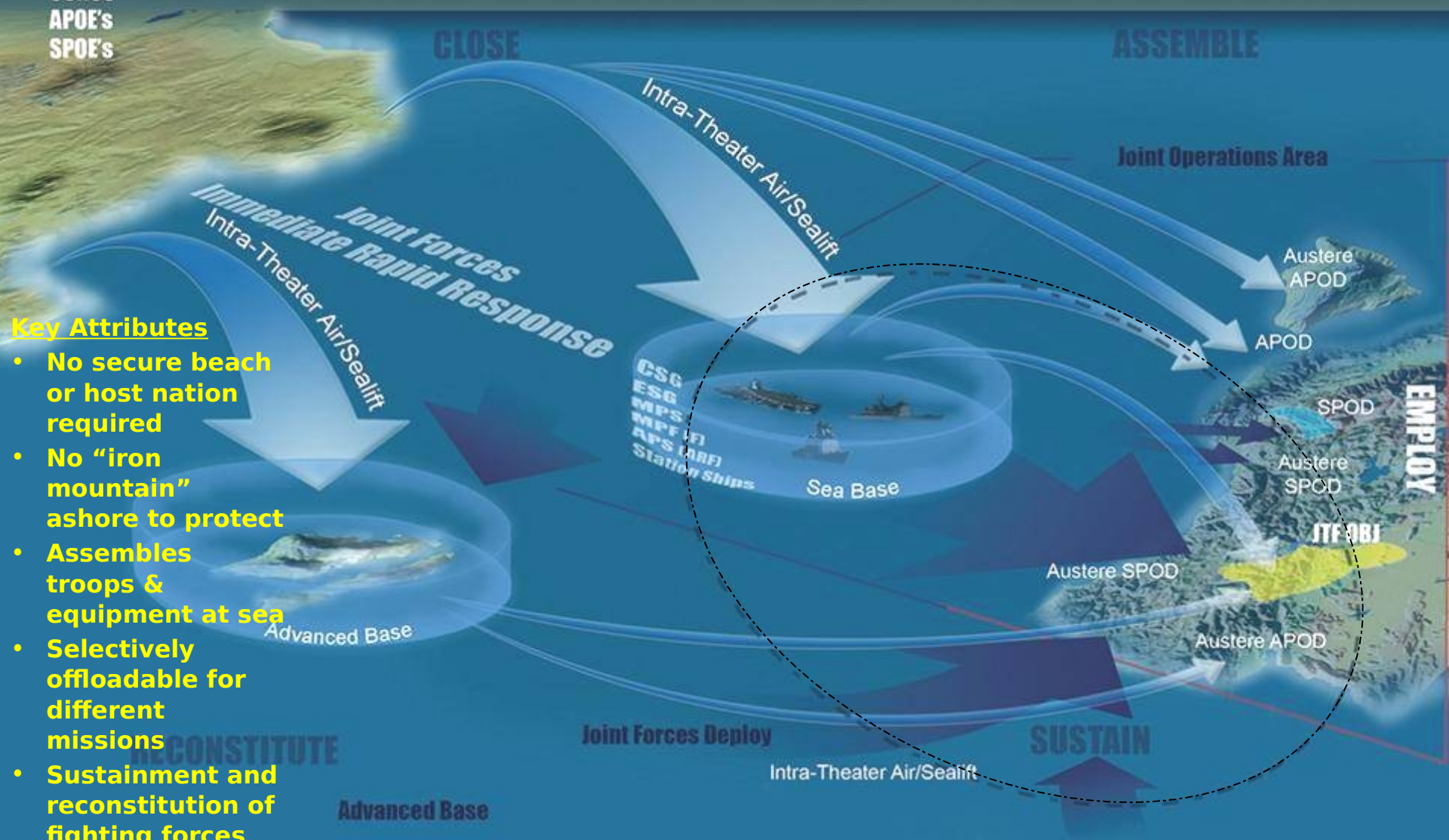




# Tomorrows Capabilities Sea basing

## Seabasing Overarching View

CONUS  
APOE's  
SPOE's



### Key Attributes

- No secure beach or host nation required
- No "iron mountain" ashore to protect
- Assembles troops & equipment at sea
- Selectively offloadable for different missions
- Sustainment and reconstitution of fighting forces



# What's in the Seabase?



**Carrier Strike Group**

**Expeditionary Strike Group**



**Maritime  
Prepositioning  
Group**



**Combat  
Logistics Force  
Ships**

**Coalition Force  
and Sister Service  
Ships**



**Task organized forces  
to meet  
COCOM mission  
requirements**

**Connectors**



***Seabasing is more than just  
MPF(F)...***





# Deploy as a MEB to fight as a MEF



## How we fight

## MPF(F) Contribution

### - MCO requires MEF (3.0 MEB's) level forcible entry

Echelonment of the force is a mitigation strategy for reducing the risk associated w/AE lift shortfall

### - Echelonment

**AE:** 2.0 MEB (Amphibious Ships)  
**(Rein):** 1.0 MEB (MPF(F))  
**(Reinforcing)**

MCRP; (Rein), includes the forward phasing of additional forces...forming a larger MAGTF from smaller initial forces whereby a single MAGTF is expanded...through the addition of personnel, equipment, and organizations by sea/or airlift...can be used to combine multiple MAGTF's.

**AFOE: Remaining assets of the MEF w/sustainment (Surge Shipping with RBE of two MEBs)**

- **Rapid Force closure**
- **At-sea arrival and assembly of forces**
- **Employment of Surface and Vertical BLT's**
- **Selective offload of equipment sets to meet mission**
- **Persistent sustainment**
- **At Sea Reconstitution**
- **Supports forward engagement and forcible entry**
- **MPF(F) by design is not assault echelon shipping, will not count as AE Shipping; therefore, MPF(F) forces are not forcible entry capable**

## Definitions

*MPF(F) is NOT AFOE but necessary to complete the MEF*

*and provide rapid MEB level reinforcement!*

- **Assault Echelon (AE)** - "...the element of a force comprised of tailored units and aircraft assigned to conduct the initial assault..."
- **Assault Follow On Echelon (AFOE)** - "Equipment and Supplies required to support and sustain the assault.... normally required in the objective area no later than five days after commencement of the assault landing."
- **Lodgment Stabilization** - "Support the increasing flow of forces and logistical resource requirements... joint force must rapidly build up combat power in the lodgment...take immediate steps to optimize



# Maritime Expeditionary Capabilities Supporting the Long War

## Phase 0: Shape the Environment.

This phase involves those joint, interagency and multinational activities conducted on an ongoing, routine basis to assure or solidify friendly relationships and alliances and/or deter potential adversaries.

MPF(F)

Amphib

## Phase 1: Deter the Enemy

This phase focuses on deterring specific opponents by demonstrating the capability and resolve to apply force in pursuit of U.S. interests. These actions will likely build upon Phase 0 activities and may include a show of force or initiatives that would facilitate deployment, employment, and sustainment of additional forces within the region.

MPF(F)

Amphib

MPF

## Phase 2: Seize the Initiative.

Hostilities commence during this phase. Combat power is applied to delay, impede, halt, or dislodge the adversary as well as to gain access to theater infrastructure and enhance friendly freedom of action. Concurrently, assistance is provided to relieve conditions that precipitated the crisis in order to promote stability.

Amphib (Primary)

MPF(F)  
(Reinforce)

## Phase 3: Dominate the Enemy.

The focus during this phase is on the exploitation, pursuit, and destruction of the enemy in order to break the opponent's will for organized resistance. Stability operations will also be conducted as needed to facilitate transition to the next phase.

AFOE

APS

## Phase 4: Stabilize The Environment

The priority during this phase will be on stability operations, the reconstitution of infrastructure, and the restoration of services. This phase concludes with the transfer of regional authority to a legitimate civil entity.

MPF/APS

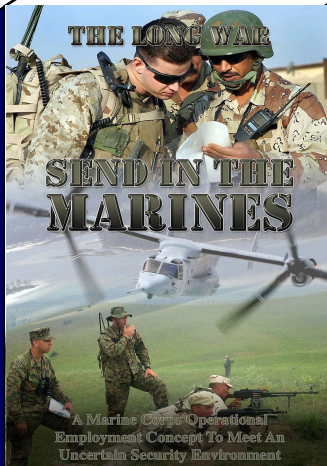
MPF(F)

## Phase 5: Enable Civil Authority.

Legitimate civil authorities are enabled in their efforts to provide essential services to the populace. These activities include required coordination activities by U.S. military forces with multinational, interagency, and non-governmental organizations while promoting a favorable attitude among the populace toward U.S. and host nation objectives.

MPF/APS

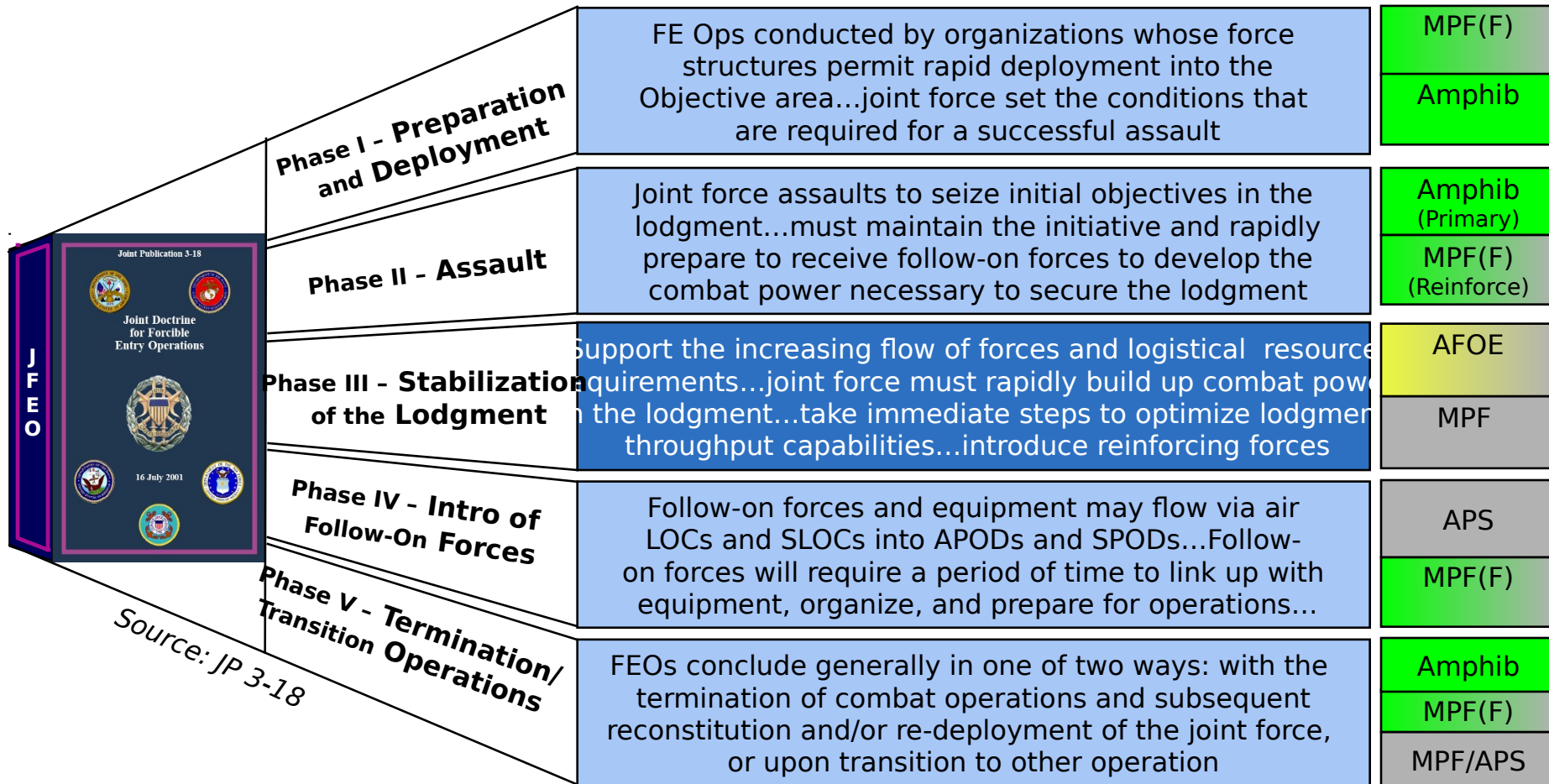
MPF(F)



\*Agility \*Deployability \*Self-sufficiency \*Adaptability  
\*Interoperability



# Maritime Expeditionary Capabilities Supporting JFEO



**MPF(F) Contributes/Enhances Rapid Build-up Ashore**



# Key Capability Attributes



- **Amphibious Warfare Ships**

- Assault Echelon shipping; capability to cohesively employ surface and vertical AE elements/units in anti-access environment
- Built to MILSTDs, Inherent survivability, self-defense, and Navy crewing to support maritime forcible entry operations
- Interoperable within a Seabase
- Forward presence, deterrence

- **Maritime Prepositioning Force (Future) (MPF(F))**

- *MPF(F) is not assault echelon shipping; therefore, MPF(F) forces are not forcible entry capable*
- Built to commercial standards, one compartment flooding, system redundancy limited, No self-defense, requires Sea Shield in a non permissive environment, MSC Crew
- Capable of at-sea arrival and assembly of forces; selective offload of equipment sets to meet unique mission requirements for Seabased Ops, including reinforcing a MEF
- Contribute to Forward presence, deterrence and potential capability to support forward engagement requirements by split ops

- **Joint High Speed Vessel (JHSV)**

- Aluminum hull, commercial car ferry (non-developmental) technology
- Not suitable for operations in anti-access environment
- Minimum aviation/C2 capability



# Amphib and MPF(F)



## Organization for Deployment and Employment

Amphibious MEB (14,484)*			MAGTF Integration	MPF(F) MEB (14,484)*			
Aboard Amphibious Ships	Assault Echelon (AE) 10,055*	Assault Element		All MEB Equipment Prepositioned Afloat	Sea Base Echelon (SBE) 8,679*	Sea Base Maneuver Element (SBME)	Selective Offload
		Assault Support Element				Sea Base Support Element (SBSE)	
	Forward Base Echelon 2,419*				Forward Base Echelon (FBE) 1,907*		General Offload
Other Shipping	Assault Follow-on Echelon (AFOE) 2,010*				Sustained Operations Ashore Echelon (SOAE) 3,898*		
	Amphibious Ships provide Forcible Entry Capability				MPF(F) Provides Rapid Reinforcement and Sustainment		
				* NSE Not Included			



# Lift Requirement



## MAGTF Combat Systems

DRAFT 10 March 2005



### Eagle Eye UAV

VUAV Block 1 (Eagle Eye) provides electronic observation, IR and Allground radar.



### UH-1Y

Supports 8 combat loaded troops with a crew of 4. Maximum payload: 3220 lbs. Long range cruise: 135 kts. Maximum Continuous Power speed: 158 kts. Mission radius: 130nm with a 2180lb payload. Maximum endurance: 3.3 hrs.



### AH-1Z(W)

AH-1Z: Six weapons stations, long range cruise is 134 kts, dive speed: 222 kts, mission radius: 125 nm with a 2500lb payload. Maximum Continuous Power speed: 155 kts. Maximum endurance: 3.3 hrs.



### MV-22

MV-22 (Osprey): Self deploy up to 2100 nm with one refueling. Speed: 240 kts. Capable of external loads of 10,000 lbs (HMMWV).



### HLR

HLR (CH-53K): Capable of 27,000 lbs. To 110nm. HLR MV-22 loads for sustainment.



### Joint Strike Fighter

Joint Strike Fighter: STOVL, operates from L Class CV and austere sites. Combat radius is 450 nm, air to air and air to ground capable.



### CLAWS

Rapidly deployable, all-weather, standoff air defense. Counters cruise missiles, fixed and rotary wing aircraft.



### JPADS

Highly Accurate, autonomously guided, able to deliver fully rigged bundles weights from 250lbs up to 1200lbs. Being developed to reach a fully rigged bundle weight of 10,000lbs. Great flexibility to deliver multiple bundles to multiple destinations from one aircraft to multiple aircraft.



### Dragon Runner

Small, four-wheeled, non-portable mobile ground sensor designed to increase situational awareness by providing observation of tactical objectives and potential danger areas beyond line of sight where human vision is impractical or unsustainable.



### Gladiator

Unmanned multipurpose weapon and scouting platform capable of working the APLOS, MGS UAV and M400 Maritime Class. Future users payloads may include non-lethal weapons, communications relay, non-supply, casualty evacuation, or counter sniper employment.



### ITV

ITV internally transportable by MV-22 and CH-53E. The vehicle must be designed so that the weapon stations can be employed 40 seconds upon exiting the aircraft and support a 2000 lbs payload.



### IFAV

The Infantry Fast Attack Vehicle is a high mobility, multi-mission vehicle that is designed to provide the MAGTF with improved ground mobility.



### LWPM

The Lightweight Prime Mover is an air transportable, protected vehicle that is capable of towing the M777 howitzer and will accommodate 7-15 battle equipped Marines.



### HMMWV(R)

Capability shortfall in the present HMMWV-A2 fleet are being studied. Areas of concern are: armor, power train, suspension, maneuverability.



### MTVR

Medium Tactical Vehicle Replacement is designed to meet a 70% off road and 30% on road transport requirement. Can carry a 7 ton payload on primary and secondary roads.



### LVSR

Logistics Vehicle System Replacement: 22.5 tons on road, 16.5 tons off road. Capable of handling 150 containers.

### FRSS

Employed forward of the marginal company. Rapidly deployable, tactical mobility capable 15 points/24 hours.



### LAV-25

Provides MAGTF with the capability to conduct reconnaissance, security, economy of force, and limited offensive/defensive actions. Service Life Extension underway to improve survivability and extend life to 15 years.



### EFV

MAGTF's primary mobility during amphibious operations and combat operations ashore. An armoured amphibious vehicle capable of transporting Marines from sea to land objectives.



### MEFFV

MEFFV, in concept, will provide the 2015 and beyond MAGTF to complement the capabilities with a family armoured vehicles and armoured fighting vehicles of the EFV.



### MTA1

MAGTF's heavy armor capability. Firepower Enhancement increases detection range, recognition, target identification, decreases target engagement response time, integrates situational awareness systems.



### EFSS

Lowest, light 120mm mortar and internally transported vehicle. From variety of mortars to greater than 7000 meters. The M26's heaviest indirect fire system.



### LW155

155mm towed howitzer with GPS/INS-aided navigation and positioning will provide high volume, all-weather, indirect fires to almost 40 kilometers and precision to under three meters. It will fire all US 155mm artillery ammunition.



### HIMARS

wheeled rocket/artillery system capable of firing rockets and missiles in the Multiple Launch Rocket System Family of Munitions to ranges greater than 45 kilometers.



### CONDOR

The Command and Control Center/Network Center/Control Center (CONDOR) supports the Command and Control (C2) joint functional area and will enable forces to maintain data network connectivity beyond line of sight.



### IISR

The Integrated Info Squad Radio (IISR) is a next generation, personal radio, satellite, wireless command and control capability that enables the Infantry squad leader to communicate with his fire team leaders in complex terrain.



### ECCS

The Expeditionary Command and Control Suite (ECCS) is a MAGTF transportable and enables the MAGTF Commander an advanced base defense in a crisis to establish long haul, defense communication to maintain situational awareness picture with incoming radio threat and over in the Area of Operation.



### TSM

The Transition Switch Module (TSM) provides a flexible Link Level Switch capability using commercial technology to provide Marine maneuver elements with robust voice/data switching, data transport, and bandwidth management capabilities.



### TDN

The TDN augments the existing MAGTF command and control infrastructure to provide the MAGTF commander an integrated data network, forming the communications backbone for MAGTF tactical data systems and Defense Message System (DMS).



### JTRS

The Joint Tactical Radio System (JTRS) Family of Radios will be interoperable with legacy communication systems and capable of growth for new requirements and technologies, forming the tactical extension of the Transformational Communications Architecture (TCA) to access the services of the Global Information Grid (GIG).



### MCEITS

MCEITS is the Marine Corps' contribution to meeting DoD Net-centric environment and information requirements. MCEITS will provide the Marine Corps to leverage the planned capabilities of Joint and DoD programs such as the Global Information Grid Bandwidth Expansion (GIG-BE) and Net-Centric Core Enterprise Services (NCES).



### MCEN

The Marine Corps Enterprise Network (MCEN) is the Marine Corps Component of the Global Information Grid (GIG). MCEN is an enterprise framework for IT and supports all information exchange requirements for Marine warfighters and our supporting establishment.



### MAGTF C2

MAGTF C2 will deliver an "end-to-end," fully integrated, cross-functional MAGTF command and control capability. Significant development of current C2 programs that include C2C, CACCS, C2PC, C2CIS, etc. Capabilities include the ability to identify, track, command, and control assigned air, ground, and supporting forces; receive, store, process, and release critical command and control (C2) data architecture.





# Baseline MEB Aggregate Lift Requirement



2015 MEB Lift Profile						
						Comment
Personnel	Total	SBE	FBE	SOAE		
	14,484	8,679	1,907	3,898		
RO-RO Stowage	Square Feet	Short Tons				
Vehicles	467,520	12,482				
Outsized Cargo	52,136					
Aircraft	Quantity	Short Tons <sup>1</sup>	CH-46 Eq			
MV-22	48	1,146	106.6			
CH-53K	20	496	53.6			
AH-1Z	18	136	16.7			
UH-1Y	9	64	8.3			
UAS	8	13	7.0			
F-35B J SF	30	679	62.7			Not Sea Based with MPF(F)
KC-130J	12	0	0.0			Not Sea Based with MPF(F)
EF-18G	5	0	0.0			Not Sea Based with MPF(F)
Totals	150	2,535	255			
Cargo	Cubic Feet	Short Tons	Gallons <sup>2</sup>			J MICs <sup>3</sup>
			Water	J P-5	MOGAS	
	2,853,450	78,633	2,597,216	9,556,889	76,632	78,891

## Notes:

1. Source: Draft NAVAIR Report No: NAVAIR/6.7-2005/XX. Not counted with cargo.
2. Bulk liquid lift requirement remains at 20 DOS values. 45 DOS calculations: 17,743,629 Gal of J P-5 (Air = 12,502,853; Ground = 5,240,776 ) and 99,985 gal of MOGAS, plus 3,906,662 gal. of water.
3. J MICs derived from cubic feet (~33.7 cuft based on internal dimensions of 51.15" L x 41.15" W x 34.57" H with 20% BSF) for Classes I, II, III, IV, V, VI, VII, VIII, IX, X, and Misc Class II/VII. All Class V derived from weight (1,750 lbs per J MIC).

**Data Source:** 2015 Baseline MEB Equipment Density List and 2015 Baseline MEB Sustainment Study.

78,891 JMICs =  
4,931 TEUs



# Marine Corps Expeditionary Ship Capabilities

## Assault Echelon Shipping

### Minimum MEB AE Lift Requirement (15 Ships)

- Five LHD-1 (Wasp Class)
- Five LPD-17 (San Antonio Class)
- Five LSD-41 (Whidbey Island Class)



## MPF(F) Program Platforms

2 T-LHA(R)



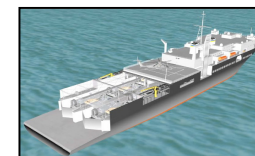
1 T-LHD



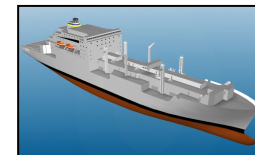
3 T-AKR



3 MLP



3 T-AKE



2 Legacy T-AK



## Capabilities

### Amphibious Warfare Ships

- Inherent survivability, self-defense, and Navy crewing
- Maritime forcible entry operations
- Forward presence, deterrence

### Maritime Prepositioning Force (Future) (MPF(F))

- Capable of at-sea arrival and assembly of forces
- Selective offload of equipment sets to meet Seabasing mission requirements
- Supports forward engagement and forcible entry Reinforcement
- **MPF(F) by design is not assault echelon shipping; therefore, MPF(F) forces are not**

## Expeditionary Capabilities

### Amphibious Warfare Ships

- 2.0 MEB AE per Strategic Planning Guidance; 15 Ao Ships per MEB AE
- Total 30 operationally available ships
  - 10 LHD/LHA(R)
  - 10 LPD-17
  - 10 LSD-41/49 (or equivalent replacement)
  - Average availability is 85% (for planning purposes)
  - Minimum 11/11/11 ships to meet 30 Ao requirement

### Maritime Prepositioning Force (Future)

- One squadron

### Legacy Maritime Prepositioning Squadrons

- Retain two squadrons to maintain afloat prepositioning capacity




# Amphibious Shipping



Platforms	Platforms
<p><b>LHA-1 (Tarawa Class) (Last Decom FY18)</b> <b>LHD-1 (Wasp Class) (Last Decom beyond FY35)</b> <b>LHA-6 (Tarawa Class Rep)</b> <b>LH(X) (Wasp Class Rep)</b> <b>LPD-4 (Austin Class) (Last Decom FY13)</b> <b>* LPD-17 (San Antonio Class)</b> <b>LSD-41 (Whidbey Island Class) (Last Decom FY31)</b> <b>LSD-49 (Harpers Ferry Class) (Last Decom FY31)</b> <b>LCC-19 (Blue Ridge Class) (Last Decom FY16)</b></p> <p><b>* Functionally replace LPD 4, LSD 41, LKA 113, and LST 1179 and LCC Ship classes</b></p>	<p><b>New Build Assault Echelon Shipping</b></p> <ul style="list-style-type: none"><li>• LPD-17</li><li>• LHA(R)</li><li>• LH(X)</li><li>• LSD(X)</li><li>• LCC(R)</li></ul> <p><b>Amphibious Lift Enhancement Prog (ALEP)</b></p> <p><b>Assault Follow On Echelon (Shipping)</b></p> <ul style="list-style-type: none"><li>• T-AVB, etc.</li></ul>
Capabilities	Issues
<p><b>Amphibious Warfare Ships</b></p> <ul style="list-style-type: none"><li>• Inherent survivability, self-defense, and Navy crewing</li><li>• Assault echelon shipping; capability to cohesively employ surface and vertical AE elements/units in anti-access environment</li><li>• Maritime forcible entry operations</li><li>• Forward presence, deterrence</li></ul> <p><b>Expeditionary Requirements</b></p> <ul style="list-style-type: none"><li>• 2.0 MEB AE per Strategic Planning Guidance; 15 Ao Ships per MEB AE (minimum).</li></ul>	<ul style="list-style-type: none"><li>• Total 30 operationally available ships (POR is 9/9/12)<ul style="list-style-type: none"><li>- 10 LHD/LHA(R)</li><li>- 10 LPD-17</li><li>- 10 LSD-41/49 (or equivalent replacement)</li><li>- Average availability is 85% (for planning purposes)</li><li>- <u>Minimum</u> 11/11/11 ships to meet 30 Ao requirement</li></ul></li><li>• Weight and Stability of ships as Forces grow (see [unclear])</li></ul>



# Amphibious Assault Ship Replacement LHA-6/9

Preliminary Design Platform	Description
<p><b>LHA-6</b></p> 	<p>Displacement, Full (LHD) 44,971 lt  Speed 22.2 kts  Length 844 ft  Beam 106 ft  Draft 28.82 ft (Full Load)  Crew 102 Officers; 78 SNCO; 1024 Enlisted  Marine Detachment 1,687 troops; 184 surge  Med Capability 2 Med OR; 24 Ward  Surface Interface Well 0  Flight Deck 9 CH-53K Spots  Elevators 1 Port (37 ½ t); 1 Starboard (37 ½ t)  Hangar Bay / High Bay 30,542 ft2 / Two 7 Frame High Bay (49 ft)  Vehicle Square 19,112 ft2  Cargo/Ammo Cube 145,963 ft3  Cargo Fuel (JP-5) 1,300,000 gal</p>
Program Status	Issues
<ul style="list-style-type: none"> <li>• <b>LHA 6 Class (LHA(R) Flight 0), a transformational ship to replace the LHA 1 class of amphibious assault ships.</b> <ul style="list-style-type: none"> <li>- Will have the flexibility to operate in the traditional role as the flagship for an ESG as well as to support the Assault Echelon of a MEF; provides the flexibility to operate and be a vital part of the Sea Base.</li> </ul> </li> <li>• <b>Program to enhance amphibious aviation capability-meet increased demand created by JSF-MV22.</b> <ul style="list-style-type: none"> <li>- Compliments the MEU, 1:1 Future composite ACE (6 F-35B, 12 MV-22B, 4 CH-53K, 4 AH-1Z, 3 UH-1Y, and 2 MH-60 SAR)</li> <li>- Or a JSF platform to host 22 F-35B aircraft.</li> </ul> </li> <li>• <b>LHA-6 planned w/o well-deck, contract awarded June 07; Milestone B ADM Feb 06; start FAB Nov</b></li> </ul>	<ul style="list-style-type: none"> <li>• <b>LHA-9 design decision (RIC &amp; Well Deck) pending based upon design for LHA-7 FY10 ship intended for the MPF(F) big deck.</b></li> <li>• <b>Expeditionary Role as Amphibious Warfare Ship to support the Strategic Planning Guidance and provide the Operational Availability (Ao) to support 2.0 MEB Assault Echelon; Naval Shipbuilding Plan projects 9 Big Decks (7 LHDs &amp; 2 LHA(R)s in FY22. This is in contradiction to USMC requirement for 11 AE Big Decks.</b></li> <li>• <b>ESC will support CONOPS refinement during Spring 08.</b></li> </ul>






# Amphibious Transport Dock

## LPD-17 San Antonio Class



Platform	Description
 <p><b>LPD-17</b></p>	<p> <b>Displacement (Full)</b> 24,900 lt  <b>Speed</b> 24.5 kts  <b>Length</b> 684 ft  <b>Beam</b> 105 ft  <b>Draft</b> 23.0 ft (Full Load)  <b>Crew</b> 360 Sailors /3 Marines  <b>Troop Lift</b> 66 Officers; 41 (&gt;E7); 597 (&lt;E6);  <b>95 Surge</b>  <b>Med Capability</b> 2 Med OR; 4 Isolation Ward;  24 Bed Wards &amp; Casualty Overflow  <b>Surface Interface Well</b> 1 (2 LCAC or 1 LCU); 14 EFV  <b>Flight Deck</b> 2 Ops Spots/4 Exp Spots  <b>Hangar Bay</b> 1 MV-22 or CH-53K  <b>Vehicle Square</b> 25,000 ft<sup>2</sup>  <b>Cargo Cube</b> 35,000 ft<sup>3</sup>  <b>Cargo Fuel (JP5)</b> 215,000 gal </p>
Program Status	Issues




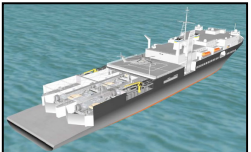
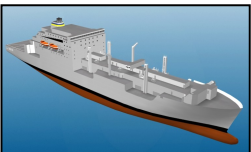


SHIP	Commission	Home	Remarks
LPD 17 San Antonio	14 Jan 06	Norfolk	
LPD 18 New Orleans	5 Mar 07	San Diego	
LPD 19 Mesa Verde	15 Dec 07	Norfolk	Accept Trials Success Sep 07
LPD 20 Green Bay	Proj Oct 08	San Diego	New Construction
LPD 21 New York	Proj Oct 09	Norfolk	New Construction
LPD 22 San Diego	Proj Oct 10	San Diego	New Construction
LPD 23 Anchorage	Proj Jan 11	San Diego	Authorized
LPD 24 Arlington	Proj Jul 11	Norfolk	Authorized
Functionally Replace LPD 4, LSD 41, LHA 113, LST 1179 and LCC Ship			

- Program of Record is for 12 ships but only 9 are currently funded.
- 9th ship (LPD-25) to be delivered in FY-12
- Based on current and projected lift requirements, USMC may seek to purchase additional ships (10-11)
- Marine Corps requires a 10<sup>th</sup> and 11<sup>th</sup> LPD 17 to meet 2.0 MEB of Lift, #2 on USN FY09 unfunded list
- LPD-17 hull form may be used for LCC(R) and LSD(X) platforms based on Navy Single Hull initiative.



# Maritime Prepositioning Force (Future)



Platform	Description
<div> <div>2 T-LHA(R)</div> <div>  </div> </div> <div> <div>1 T-LHD</div> <div>  </div> </div> <div> <div>3 T-AKR</div> <div>  </div> </div> <div> <div>3 MLP</div> <div>  </div> </div> <div> <div>3 T-AKE</div> <div>  </div> </div> <div> <div>2 Legacy T-AK</div> <div>  </div> </div>	<ul style="list-style-type: none"> <li>• Capable of at-sea arrival and assembly of forces</li> <li>• Selective offload of equipment sets to meet Seabasing mission requirements</li> <li>• Supports forward engagement and forcible entry</li> <li>• <u>MPF(F) Shipping will not count as AE Shipping</u></li> <li>• <b>MPF(F) by design is not assault echelon shipping</b></li> </ul>
Program Status/Issues	Concept of Employment
<ul style="list-style-type: none"> <li>• <b>CDD Incremental Development</b> <ul style="list-style-type: none"> <li>- <b>1 MLPs and T-AKEs</b> <ul style="list-style-type: none"> <li>• JCB/JROC/CNO APPROVED</li> </ul> </li> <li>- <b>2 Big Decks</b> <ul style="list-style-type: none"> <li>• Begins staffing Jan 08</li> <li>• R3B April/May 08</li> <li>• JROC Jul/Aug 08</li> </ul> </li> <li>- <b>3 LMSRs - Begins staffing Aug/Sep 2008</b> <ul style="list-style-type: none"> <li>• R3B Planned Oct 2008</li> </ul> </li> </ul> </li> <li>• <b>Program of Record is for 14 ships last ship FY20</b></li> <li>• <b>IOC (FY17), FOC (FY22)</b></li> <li>• <b>LHD/T-AKs (MSC/MPF) (3) platforms from existing ships</b></li> </ul>	 <p>The diagram illustrates the Joint Seabasing Concept of Employment, showing a sequence of operations: Closure, Assembly, Employment, Sustainment, and Reconstitution. It features various ship types and capabilities such as Sea Strike, Sea Shield, Sea Base, FORCENet, GFS, MARDET, SOF, Forcible Entry, MEU, ESG, Sea Based MAGTF, Assault Echelon: Amphib Ships, MPF (F), AE Reinforcing: MPF(F), Joint Follow-On Forces, CSG, Theater Security Cooperation SPMAGTF, USCG - Maritime Security, and Intra-Theater Connectors. The diagram also shows the flow of forces from the coast to the sea and then to the shore.</p>



# Revolution/Evolution

## Past

- Operational Capability
- Forward Presence
- 13 Ships in 3 Squadrons
- Each Squadron supported
- MEB of 14,400+ Marines
- Proven Force Enabler

## Present

- MPF Enhancement
  - 3 additional Ships (1 per sqdn)
  - Additional Capabilities:
    - Naval Mobile Constr. Bn
    - Naval Fleet Hospital
    - Expeditionary Airfield

## Future

- MPF Future (2015 and Beyond)
- Seabasing





# Prepositioning Today and Tomorrow



- **MPF**

- Port-to-port (or in-stream) capability
- Require Host Nation Support (HNS) to close and assemble the force
- Significant lodgment - both APOD and SPOD required in theater
- High force protection bill associated with establishing and maintaining a secure lodgment
- Ships densely packed, assemble ashore



- **MPF(F)**

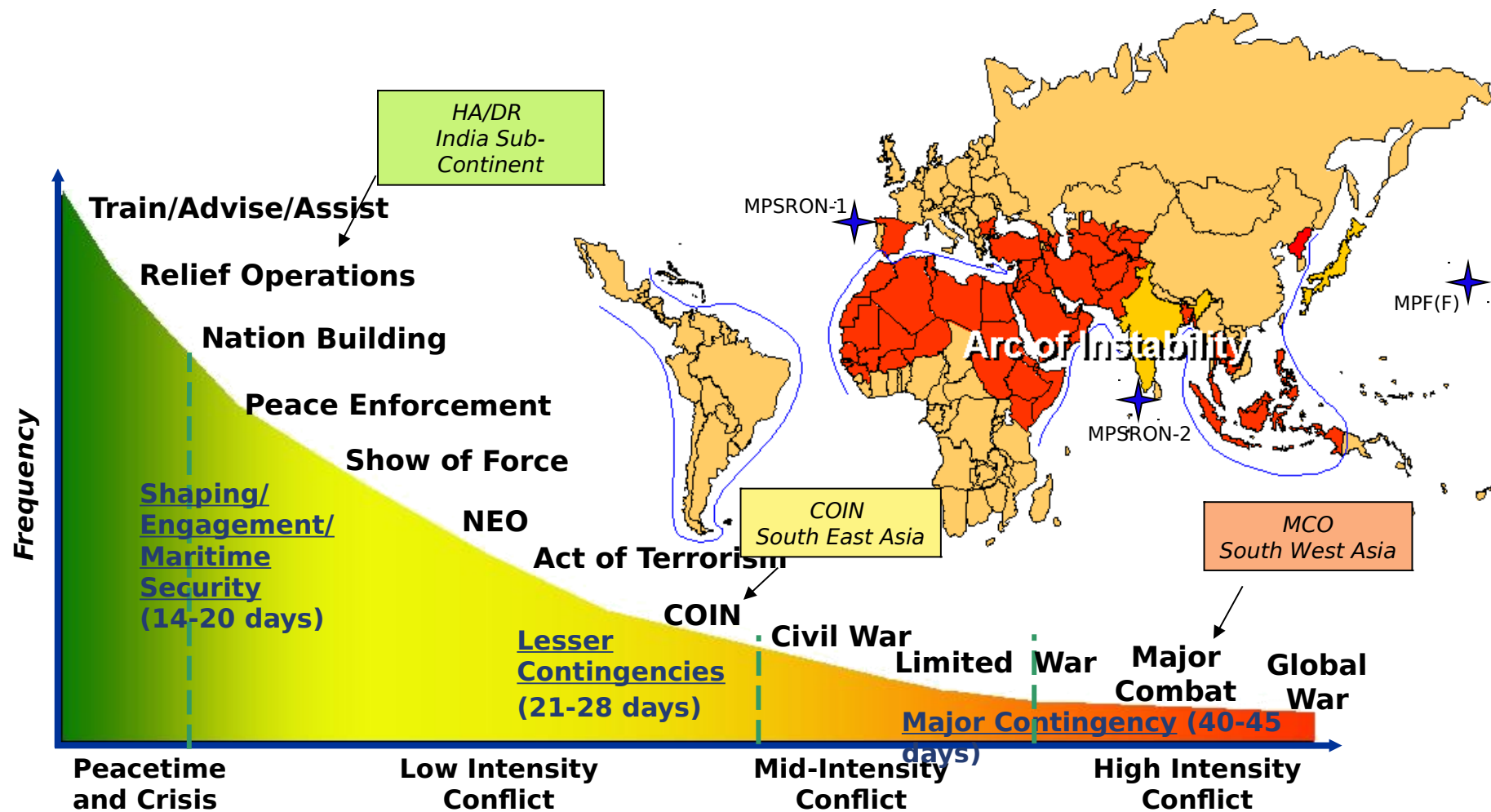
- Operate in restrictive access environments
- Arrival, assemble and integrate at sea
- Selectively offloadable, tailorable force packages
- Employ combat ready forces from OTH
- Indefinite sustainment from the sea base up to a brigade size force operating ashore
- Reconstitute forces to the sea base for redeployment







# MPF(F)'s Geo-Political Applications



**MPF(F) - Responsive and Scalable across the full "Range of Military Operations"**



# MPF(F) Squadron Required Capabilities



- ✓ Preposition the MEB (1 Air and 2 Surface Battalions [selective offload])
- ✓ Close a MEB in 10-14 days
- ✓ At Sea Arrival and Assembly in 24-72 Hours
- ✓ Employ one Surface Battalion and one Vertical Battalion in 8-10 hours
- ✓ Provide accommodations and aircraft/vehicle maintenance capability (O level/selected I level) for a MEB
- ✓ Sustain the forces ashore from the Sea Base
- ✓ Provide Level II (resuscitative surgery) medical support
- ✓ Accommodate and operate organic surface connectors
- ✓ Conduct external operations in Sea State 3 threshold/Sea State 4 objective
- ✓ Provide MEB C2

<u>2015 MEB assumptions</u>		<u>2015 R/W/T/R MEB ACE</u>	<u>Required Squadron Capacity</u>	
11,912	Personnel *	48	MV-22	947,224 RO/RO ft <sup>2</sup>
799	HMMWVs	20	CH-53(K)	3,001,747 Cargo ft <sup>3</sup>
106	EFVs	18	AH-1	8,808,424 POL ~ gallons
335	MTVRs	9	UH-1	197 CH 46 Equiv
30	M1A1 Tanks	2	H-60 / Aviation Ship	20 Acft operating spots
18	LW 155 Howitzers	8	UAVs	
1,226	Trailers and others			

\* Includes MEB, NSE, MSC Crew, and Standing

UNCLASSIFIED



# MPF(F) Squadron Composition

## 2 T-LHA

NEW BUILD



Length: 844 ft Beam: 106 ft Draft: 28.2 ft Displacement: 45K LT  
Per Sqd: 2 Speed: ~20 knots Range~9,500 nm  
Crew: 285 Stand Det: 23 MAGTF: 1,490 NSE: ~590 Berths: 3,052  
A/C Stow: 55 A/C Op Spots: 9 JP-5: 1.6 Mil gal Water: 400k Gal/200K gal Per day  
Sqft: 11,600 CuFt: 160,000 Well Deck: N/A  
TEU: N/A Med: 2 OR & 24 Beds-4 OR&16/45 Stern Ramp:

## 1 T-LHD

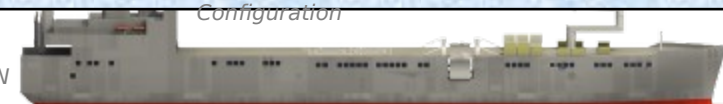
LEGACY



Length: 844 ft Beam: 106 ft Draft: 27 ft Displacement: 42K LT  
Per Sqd: 1 Speed: ~20 knots Range~9,500 nm  
Crew: 285 Stand Det: 23 MAGTF: 1,656 NSE: ~670 Berths: 2,946  
A/C Stow: 42 A/C Op Spots: 9 JP-5: 607 K gal Water: 400K Gal/200K Gal Per Day  
Sqft: 24,012 CuFt: 145,000 Well Deck: 3 LCAC  
TEU: N/A Med: 6 OR & 60 Beds Stern Ramp: 72 ST

## 3 T-AKE

NEW BUILD  
MODIFIED DESIGN



Length: 950 ft Beam: 106 ft Draft: 34 ft Displacement: ~55K LT  
Per Sqd: 3 Speed: ~20 knots Range~9,500 nm  
Crew: 30 Stand Det: 48 MAGTF: 705 NSE: ~62 Berths: ~845  
A/C Stow: 0 A/C Op Spots: 2/4 JP-5: 380.4K gal Water: 33.5K gal/24K gal Per day  
Sqft: 260,799 CuFt: 51,682 Well Deck: N/A

Artist Rendition/Notional Configuration  
FLO/FLO Technology focused

## 3 MLP

NEW BUILD  
/DESIGN



Length: TBD Beam: TBD Draft: TBD Displacement: TBD  
Per Sqd: 3 Speed: ~20 knots Range~9,500 nm  
Crew: 64 Stand Det: 10 MAGTF: 594 NSE: ~128 Berths: ~1,458  
A/C Stow: 0 A/C Op Spots: 1 JP-5: ~1.2 Mil gal Water: ~168K Gal/TBD gal Per day  
Sqft: ~11,253 CuFt: ~935 Mission Deck: 6 (LCAC)  
TEU: N/A Med: Sick Call Stern Ramp: N/A

## 3 T-AKE

NEW BUILD  
MODIFIED DESIGN



Length: 689 ft Beam: 105 ft Draft: 29 ft Displacement: 39K LT  
Per Sqd: 3 Speed: ~20 knots Range~9,500 nm  
Crew: 123 Stand Det: 6 MAGTF: ~10 NSE: ~55 Berths: 197  
A/C Stow: 1 A/C Op Spots: 1 JP-5: 1.3 Mil gal Water: 52.8K Gal/28K gal Per day  
Sqft: N/A CuFt: 1,108,592 Well Deck: N/A  
TEU: 61 Med: Sick Call Stern Ramp: N/A

## Legacy

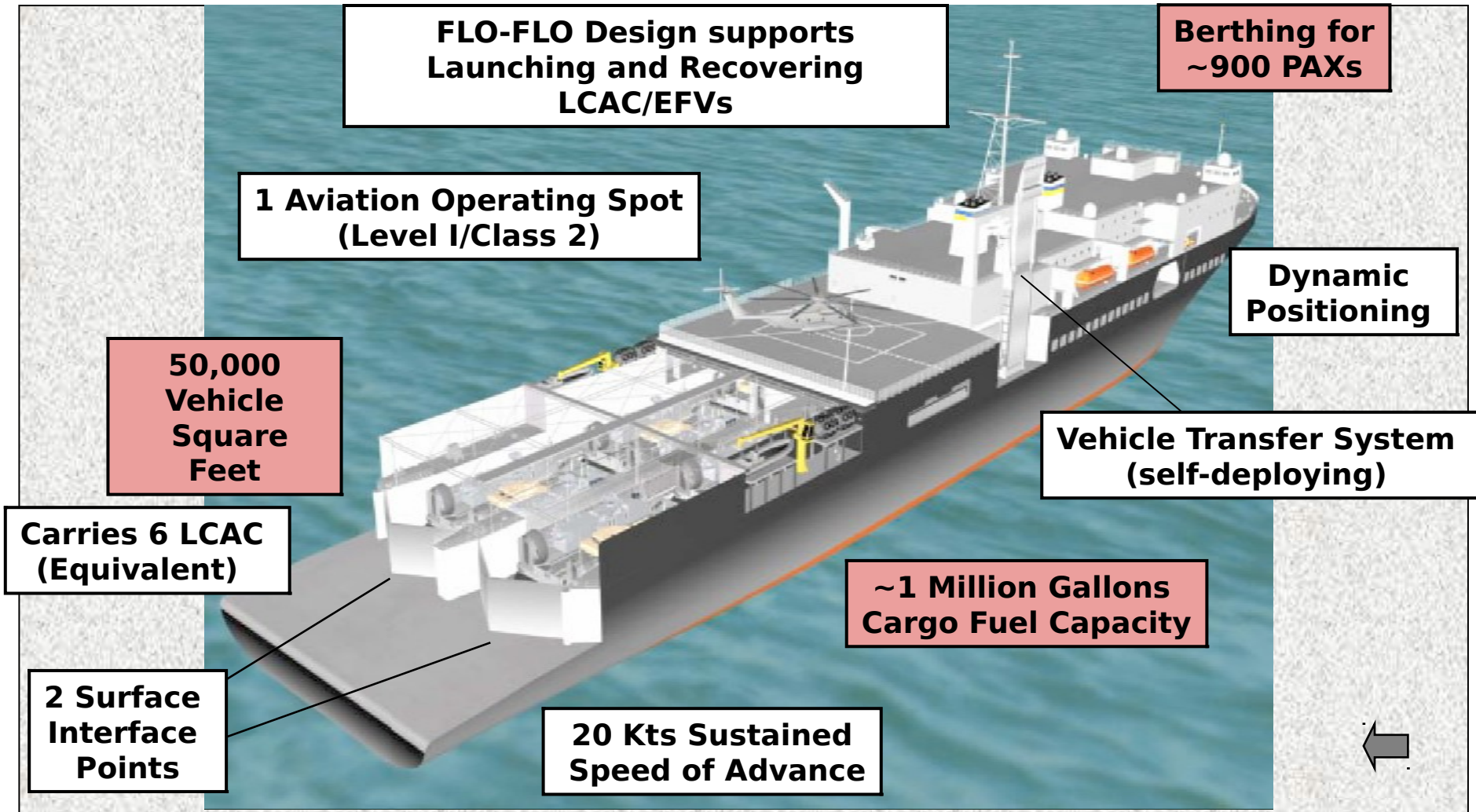


Length: 673 ft Beam: 106 ft Draft: 34.6 ft Displacement: ~46K LT  
Per Sqd: 2 Speed: 17.7 knots Range~12,900 nm  
Crew: 30 Stand Det: 16 MAGTF: 71 NSE: ~10 Berths: 127  
A/C Stow: 0 A/C Op Spots: 1 JP-5: 1.4 Mil gal Water: 99K Gal/ 25K Gal Per day  
Sqft: 152,185 CuFt: N/A Well Deck: N/A





# Notional MPF(F) MLP



ional Concept - Configuration & Detail Design to be Completed by Shipyard

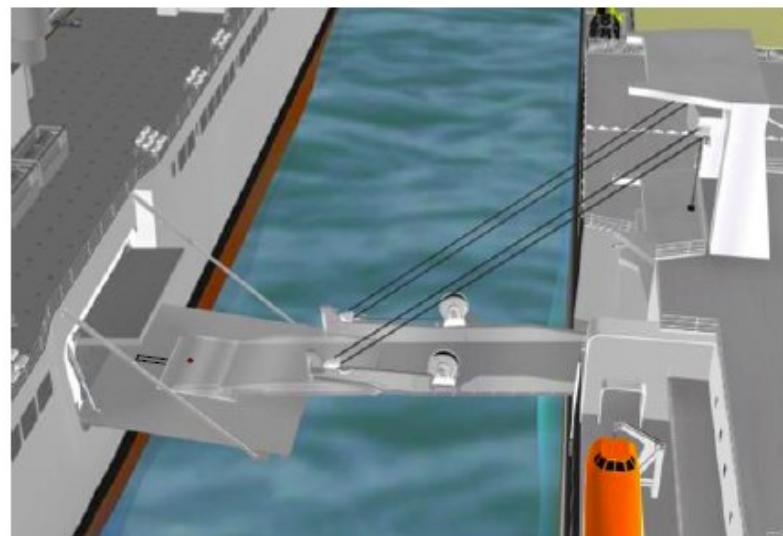
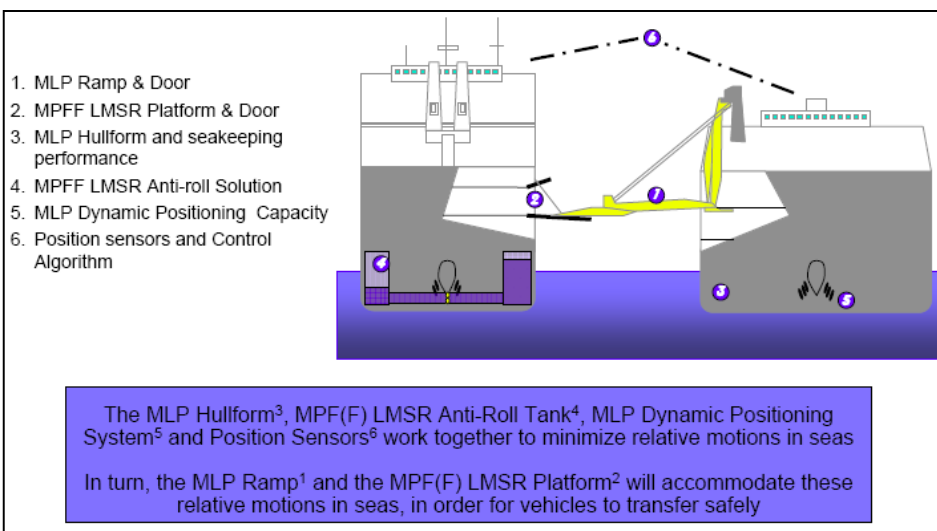




# Vehicle Transfer System (VTS)



*VTS is the critical new technology that enables surface movement*



- **Primary system to transfer vehicles and personnel from the LMSRs to the MLPs underway**
- **Dynamic positioning (DP) of MLP to LMSR while underway**
- **1 VTS per MLP (no redundancy)**
- **24 hour ship transfer (notional) period through NATO SS3**



# MPF(F) R&D Program At-Sea Test



Alongside operations (also called skin-to-skin) permits the USNS Red Cloud to lower the ramp and transfer vehicles to the Dockwise Mighty Servant 3, for further loading onto LCACs. This simulates the assembly and offload of up to 1/3 of a surface Battalion Landing Team.



# Joint High Speed Vessel (JHSV)



## JHSV Capabilities & Characteristics

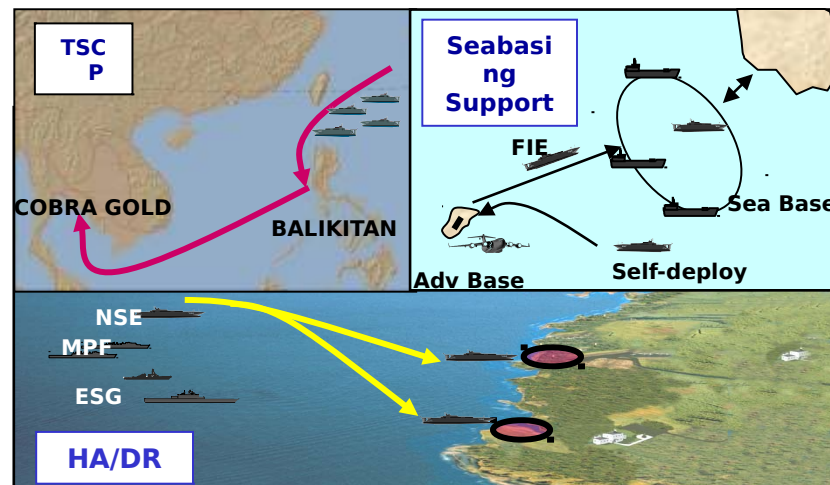
- Shallow draft (< 15'), high speed (> 35 kts loaded)
  - Ability to enter small, austere/degraded ports unassisted
- Self-deploying between theaters
- 600-700 ST payload, 1200 NM range, 35 kts, Sea State 3
  - Smaller payloads = greater range, larger payloads = less range
- Seating for 312 Marines (Co (rein)); berthing for 104 Marines
- 20-22,000 sqft mission deck/cargo bay (M1A2, MTVR compatible)
- Slewing ramp (astern to 40 degrees forward)
- Level I, Class 2 flight deck for H-60s, H-46s, UH-/AH-1 helicopters
  - Fuel only, no services
- 20 ST crane for TEU movement, small boat launch & recovery



## JHSV Quantity and Basing

- 8 JHSVs funded (5 Army, 3 Navy), 2 addl USN JHSVs in PR09
- **Quantity funded does not equal quantity required**
- Acquisition objective TBD by MS B (Aug '08)
  - PACOM, AoA, MCCDC studies suggest 16 JHSVs needed across DOD
- **7 JHSV equivalents meet USMC requirements**
  - Based on MARFOR TSCP, GWOT, intra-theater lift requirements
  - Requirement quantified in “vessel days per year” v. specific # of JHSVs
  - Assumes 180 days operational availability (Ao) per year per JHSV
  - Does not explore overlap between USN, USMC requirements
- Notional basing scheme (JHSVs swing between theaters as needed)
  - PACOM = 3 (Hawaii, Guam, Okinawa)

## USMC JHSV Missions (The “Intra-Theater Connector”)







# Joint Maritime Assault Connector (JMAC)



## Capabilities

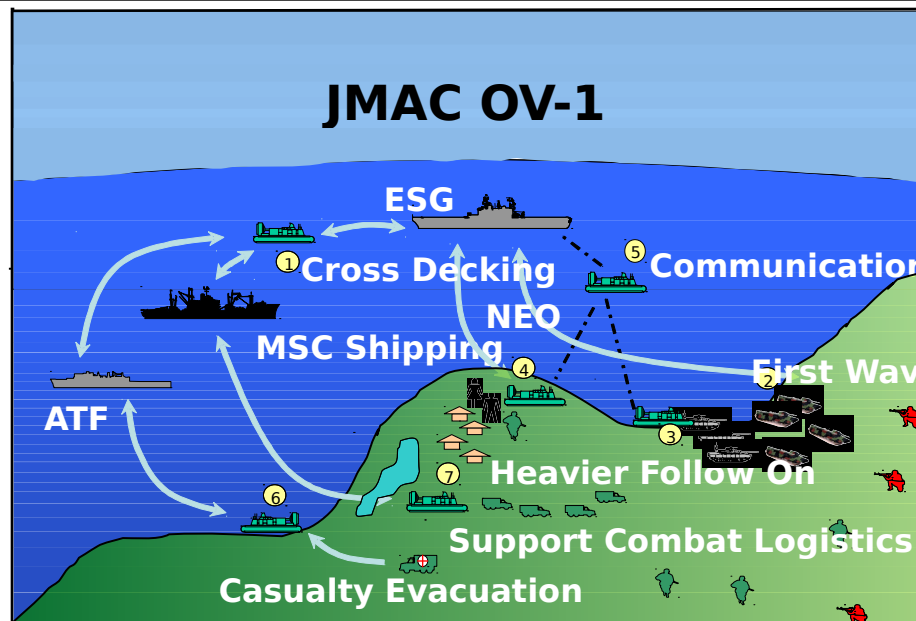
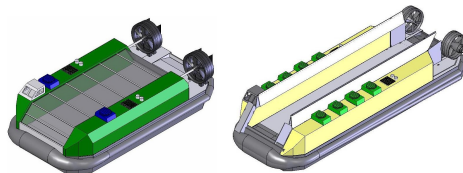
- High Speed, Over-The-Beach, Ship-To-Shore Amphibious Capability to Lift All Equipment Organic to the Ground Elements of a Marine Air/Ground Task Force
- Ability to Operate independent of tides, water depth, underwater obstacles, in NATO SS 3-4 at 25 nm or less
- Designed to address 2 gaps:
  - Conduct movement
  - Prepare for movement

## Requirements

- 2015 timeframe - significant gaps in brigade-sized maneuver concurrent with retirement of the Landing Craft, Air Cushion (LCAC) and Landing Craft, Utility (LCU) as they reach the end of operational service life
- 72 LCAC required to meet 3.0 MEB and required operational capability/ projected operational environment
- 72 LCAC required to meet COCOM OPLAN requirement of 60 operational craft
- LCAC fleet falls below required 72 LCAC in 2014

## Material Alternatives

- LCAC SLEP
- Standard Conventional 73 Short Ton (SC-73)
- Large Conventional 146 Short Ton (LC-146))







# Joint Seabasing Experimentation

## Science & Technology and Research & *Development*

**Skin-to-Skin  
Transfer**



**High Capacity UNREP**



**Selective Offload**



**Stabilized  
Cranes**



**Joint Modular  
Intermodal  
Container (JMIC)**



**Mobile Landing  
Platform**

**Interface**



**Automated Cargo Handling**

***At-Sea Arrival, Assembly, Employment,  
Sustainment***



# Seabasing Integration Division Points Of Contact



*ROW WELL...AND LIVE!*

- **Director**
  - Mr. Jim Strock
    - [james.strock@usmc.mil](mailto:james.strock@usmc.mil)
    - Comm: 703-784-6094
- **Deputy Director:**
  - LtCol John Gambrino
    - [John.gambrino@usmc.mil](mailto:John.gambrino@usmc.mil)
    - Comm: 703-784-6884
- **Expeditionary Ship Capabilities Branch:**
  - Mr. Rick Betsinger
    - [richard.betsinger@usmc.mil](mailto:richard.betsinger@usmc.mil)
    - Comm: 703-784-6038
- **MAGTF Planning Branch:**
  - Mr. Jim Horzempa
    - [james.horzempa@usmc.mil](mailto:james.horzempa@usmc.mil)
    - Comm: 703-784-8354
- **Connectors & Doctrine Branch:**
  - Mr. Dave Groves
    - [david.groves@usmc.mil](mailto:david.groves@usmc.mil)
    - Comm: 703-784-6227
- **Futures Branch:**
  - Maj Matt "Waldo" Gioia
    - [matthew.gioia@usmc.mil](mailto:matthew.gioia@usmc.mil)
    - Comm: 703-432-8144





# Questions?

## *Joint Force Enabler In Area-Denial and Anti-Access Environments*



**Rick Betsinger**  
Branch Head, Expeditionary Ship  
Capabilities Sea basing Integration  
Division  
Capabilities Development Directorate  
Marine Corps Combat Development  
Command  
Quantico, Virginia 22134  
703.784.6038